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RDN and LTSN Partnership Fund

Name of proposed project

A project to develop partnership activity between the RDN Hub EEVL and the cognate LTSN Subject Centres, covering Materials, the Built Environment, Engineering, Mathematics, Statistics and Operational Research, and Computer Science.

Lead Hub

EEVL, Heriot Watt University

LTSN Partners

1. Built Environment Subject Centre
2. Engineering Subject Centre
3. Information and Computer Sciences Subject Centre
4. Maths, Statistics and Operational Research Subject Centre
5. Materials Subject Centre

Contact Details:

Total Funding Sought

£42,250

Project duration: 1 Feb 2003 to 30 Sep 2003

1. Outline of Project

This bid requests funds to further develop partnership activity between EEVL, the RDN Hub for Engineering, Mathematics and Computing, and the cognate LTSN Subject Centres, namely LTSN Engineering, the LTSN Maths, Stats & OR Network, LTSN Information and Computer Sciences and LTSN Materials. EEVL proposes to jointly work with RDN Hub GESource to develop a partnership with LTSN Built Environment, and this is under discussion with GESource and is not included in this plan.

This funding will be used to make the discipline-based resources collected by the partners more easily available to their user communities, and to develop mechanisms for sharing resources between the RDN and the LTSN Centres. This will be done by:

1. developing a common collection development policy
2. modifying the databases already available at the Hub and Subject Centres to fit within the shared metadata framework.
3. creating a new joint database for two Subject Centres
4. installing where necessary OAI harvesters and repositories at the Hub and Subject Centres.
5. creating an agreed procedure for sharing and updating records
6. exploring advanced metadata sharing [possible]
7. developing a programme for future cooperation

2. Key Deliverables

- Partner meetings
- Partner Survey
- Collection Development Policy
- Creation of new and tailoring of existing databases of resources
- OAI repositories and gathering tools
- Shared future cooperation

3. Timetable

It is proposed that the project work should take place over a period of eight months, from February to September 2003. The draft timetable with key dates is as follows

Date	Task
Feb 2003	First partners meeting
Feb 2003	Partner Survey
March – June 2003	Creation of database
March – April 2003	Development of Collections Policy and procedures
March – June 2003	Upgrading and installing OAI harvesters and repositories
July 2003	Testing
August 2003	Incorporation of shared records into databases

4. Project Plan

The partnership activities will focus on the following areas:

A. Partnership and Collection Development

Work Package 1: Project Management

Description: The overall coordination of the project will be undertaken by EEVL, however the project is essentially a collaborative process and therefore a working group of representatives from the subject centres and the Hub will meet as required.

Deliverables: Three meetings of the partners to coordinate the implementation of the individual work packages. The first meeting in February 2002 will set out the workplan.

Work Package 2: Partner Survey

Description: A brief survey of the technical architecture of each Centre and Hub, and the collections (subjects, scope, metadata, classifications).

Deliverable: Survey of areas of difference and similarity, and recommendations for how these are dealt with within the scope of the project.

Work Package 2: Joint Collections Policy

Description: A joint collections policy, based on the outcomes of the Collections Policy work, will be developed. LTSN Centres will continue to identify resources for inclusion in EEVL, for which the general metadata will be added by EEVL. These EEVL records (“core records”) will form the basis for supplementary “Learning and Teaching records” to be created by the Subject Centres. Both partners will have access to all “composite records”, comprising of the core record plus the associated learning and teaching record. Both parties will remain responsible for maintaining their particular collections. A Centre could request that EEVL creates a record, and if this is turned down because of scope, or if EEVL is unable to cope with the demand, a Centre can create its own record which could then be shared.

Deliverable: Joint Collections Policy

B. Technical Development

Work Package 3: Creation and hosting of resources

The Subject Centres and EEVL Hub will all maintain separate databases of resources, apart from MSOR and ICS, which will develop a shared database, as there is potentially significant overlap in their subject collections. There will be different arrangements for each subject centre.

Deliverable: Databases in line with collection policy and metadata framework.

MSOR and ICS

MSOR and ICS wish to work together on this project, since they relate to both EEVL and SOSIG. A database at Glasgow will host records in three tables:

- MSOR/ICS resources database - some Statistics is already there but the rest are to be added.
- EEVL data, a subset obtained using OAI and updated regularly
- SOSIG data, a subset obtained using OAI and updated regularly

The three tables will be “joined” such that they appear to be one. The subsets could be defined by a query based on appropriate keywords in the metadata of the MSOR/ICS resources database which make it obvious which of these are shared with EEVL and SOSIG respectively.

As well as its own core records, EEVL (and SOSIG) would hold data from MSOR/ICS and the other relevant subject centres, which again could be “joined”.

Engineering

Engineering records will be hosted at Heriot Watt University.

Materials

Learning and Teaching Records will be held in a database in Liverpool. Core Records harvested from EEVL will be held in another table in the same database, and “joined” with the relevant L&T Record. This join will define which records EEVL wish to harvest in return. Searching by end users will take place transparently across both tables.

EEVL

EEVL records will be hosted at Heriot Watt University, in a MySQL database.

Work Package 5: Implementation of OAI repositories and gatherers

Description: Where collections already exist, existing records will be harvested using OAI. A mechanism will be put in place which will allow the Hub to select only web resources, as LTSN databases can hold non-web-based materials (eg books). However, giving access to these non-web-based materials from the Hub will be explored.

Mechanism for sharing metadata records

Sharing of resources: the Subject Centres and EEVL will both provide and receive metadata using the OAI protocol. All core and all learning and teaching records will be assigned unique identifiers. By associating the unique ID of a core record with that of a learning and teaching record, a composite record will be created.

Maintenance of existing resources: as metadata is altered at the Centres and EEVL, updated records can be propagated to the other partner(s) using OAI. Not all records in the EEVL catalogue will be of interest to all Subject Centres, and possibly vice versa. Therefore, the table of composite records will define the subset of records from which changes should be propagated.

Initial transfer of records: there would be an initial exchange of data to “prime the system”. Subsequent communications would always be of a “new records” and “altered records” form. Each Centre would create a table of export information for data sent to EEVL, and one of import information for data received from EEVL. The second table would be built so the records would “dovetail” onto the Centre’s existing database.

Notification of new records: the creation of new records at either a Centre or at EEVL would trigger an automated process whereby the other partner is informed of the existence of new records (by email, web console, rss etc). They would then be given the opportunity to add that record to the list of resources they harvest, or create a composite record by associating it with an existing record.

Requesting of new records: processes will be put in place to allow Centres to request that EEVL catalogue a particular resource, if it meets their criteria. This would allow EEVL to increase their collection, whilst relieving Centres of the need to add general metadata. Centres will subsequently supply the relevant pedagogic metadata.

Allowing EEVL to ‘adopt’ existing records held by the Centres: EEVL would use OAI to pick up records from the Centres’ databases. However, the more granular learning and teaching resources may only reside in Centre databases.

Deliverables: Functioning OAI 2.0 conformant gatherers and repositories, indexing and intergration tools.

Work Package 6: Marketing and Promotion

Description: This is a core activity for both EEVL and the subject centres and as such should be covered in existing marketing and promotion strategies. However, it may be possible to host another LTSN Librarians’ Day (this year to be held in Birmingham, with 50 attendees), which would foster cooperation and be a useful dissemination vehicle.

Deliverable: Possible LTSN Librarians day, press releases, as required, mentions of partnership in Subject Centres & Hub publicity.

Work Package 7 Ownership/IPR

Description: Data always belongs to the original provider, except where the data has been officially handed over. For instance although ICS data is to be held at the MSOR Glasgow site, the data will be owned by ICS and can be recalled by it at any stage. Ownership of information provided to EEVL via OAI will be retained by the providing Centre, while Information gained via OAI from EEVL will remain the property of EEVL. This ownership may not be obvious to those using the resource, but should be maintained at all times.

Deliverable: IPR Statement

C. Possible Additional Work Package

Work Package 8: Additional Technical Metadata Sharing/Exploitation of Resources

Description: No specific funds have been set against this, but during the course of the project, it is hoped to scope and explore, as “proof of concept” work, OAI links and XML import/export for the databases, to facilitate repurposing of records in specific sets (eg engineering education journals). These could be used in our own, or third party web sites, tutorials etc.

2. Longer Term View of the Relationship

In the longer term it is anticipated that the mechanisms put in place during in the project will allow ongoing sharing of resources, and the further development of joint marketing activities, eg a LTSN Librarians Day, and ongoing sharignof resources which will enrich all collections and provide a better service for the respective (and overlapping) user communities.

Appendix A: Existing collections

EEVL

EEVL currently holds approximately 6000 Engineering, 1000 Mathematics and 2000 Computing Science resources in the EEVL Internet Resources Catalogue (IRC). The metadata is in line with RDN cataloguing guidelines. The metadata does not describe the pedagogical value of the resource. Resources are evaluated for currency and relevance to the subject community. The SearchLT database of resource descriptions of engineering teaching and learning materials is hosted by EEVL, and is cross searchable with the EEVL IRC. EEVL metadata is already made available to the RDN by OAI; the RDN harvests from all its hubs on a weekly basis.

LTSN Engineering

LTSN Engineering have databases (or tables within one database) of projects and organisations; of funding opportunities; of descriptions of journals; of projects and contacts; of departments in UK HE (including HE in FE) and of case studies and evaluations. Some of the information duplicates that held by EEVL. Most of the website is database-driven.

SearchLT

SearchLT was developed for EEVL and LTSN Engineering, and is a catalogue of electronic learning resources (where learning resources are defined as having clear learning objectives, or an element of assessment, or being specifically designed or easily adapted for use by HE students). The material need not be web based, but there must be a web page which describes how it can be obtained. The resources are described by metadata which is suitable for describing content; it does not describe the functionality of delivery, discussion or assessment tools, ie a course delivered through WebCT could be described but not WebCT itself.

LTSN-ICS

There is no database of resources for teaching computing at the moment; the Centre holds lists of links as resource guides. These have come out of workshops that have been run in the sub-disciplines and the resulting communities of practice. Granularity is a key issue because of rapid changes in the discipline. Lecturers want to be able to access very small resources at the sub-discipline level – module specifications or slides for a single lecture – for example, all “ethics slides” from all HE departments. However, at a higher level resources are being catalogued directly into EEVL.

Maths, Stats & OR Network

Collections have arisen separately from the previous holdings of CTI Mathematics and CTI Statistics. In Mathematics there is a courseware database in Access with web front end using idx; a large number of reviews which were published in a newsletter and on the web in PDF format; and lists of resources of various kinds as web pages.

In Statistics, based in Glasgow, there is a monolithic database of all kinds of resources; case studies, articles, questionnaires, links to Java applets, events, news, techwatch and a glossary – ie the granularity can be as small as a single word. The Birmingham lists are gradually being moved into this database.

Some of the statistics resources relate to SOSIG as well as EEVL.

LTSN Materials

Materials have a resources database covering a broad spectrum from Engineering to Chemistry. The subject area is also of relevance to PSigate. Any resource considered relevant and suitable is included, as long as it has a URL where the resource (or more information about it) can be found, or has some other unique identifier such as an ISBN or ISSN. Keywords, in the form of embryonic subject headings, may be imposed on existing resources. Resources are catalogued by educational level, subject keywords, resource types (which go beyond those covered by the RDN) and pedagogic theme. The level of granularity is currently not particularly high, but the intention is to increase this. Plans exist to implement hierarchical links between resources, eg a parent (journal) can have children (articles within the journal). There are also FDTL projects in Materials and links are being developed with them.